A VIBRATION ISOLATOR ASSEMBLY HAVING ALTERED STRESS CHARACTERISTICS AND METHOD OF ALTERING STRESS CHARACTERISTICS OF SAME

Abstract of the Disclosure

A vibration isolator assembly, such as an isolator bushing or cradle mount, includes a housing and an isolator connected to the housing. A shaft assembly includes first and second mating components, the first component being connected to the elastomer and having a cavity of a first dimension for receiving the second component having a different, second dimension therein. The differing dimensions alter the stress characteristics of the vibration isolator assembly. In the preferred arrangement, the shaft assembly includes a first component comprising first and second portions, a thin layer of elastomer interposed between the first and second components and a second component which is inserted between the portions to relieve tensile stress in the isolator and, if desired, to impart a compressive stress in the isolator. The thin layer of elastomer permits the first components to be made more economically. The first component of the shaft assembly is made at a lower dimensional tolerance and subsequently produced to a higher dimensional tolerance by molding the thin layer of elastomer to a precision tolerance.